What is claimed is:

1. A noise reduction device comprising:

a first antenna which receives a wireless signal;

a second antenna for noise scanning;

means for setting an optimum attenuation factor according to a distance between said first antenna and said second antenna;

means for attenuating a received signal from said second antenna at the optimum attenuation factor; and

means for subtracting an output signal of said attenuation means from the received signal from said first antenna, and for thereby reducing a noise of the received signal from said first antenna.

2. A noise reduction device comprising:

a first antenna which receives a wireless signal;

a second antenna for noise scanning;

a table which stores data indicating a relationship between a distance between said first antenna and said second antenna and an attenuation factor;

means for setting the distance between said first antenna and said second antenna;

means for attenuating a received signal from said second antenna at the attenuation factor which is stored in said table and which corresponds to the set distance; and

means for subtracting an output signal of said attenuation means from the received signal from said first antenna, and for thereby reducing a noise of the received signal from said first antenna.

3. The noise reduction device according to claim 1, wherein said second antenna is disposed near a noise source.

4. The noise reduction device according to claim 2, wherein said second antenna is disposed near a noise source.

5. The noise reduction device according to claim 1, wherein

said optimum attenuation factor setting means measures an error occurrence rate of an output signal of said subtraction means while changing the attenuation factor of said attenuation means, and sets an attenuation factor, at which the measured error occurrence rate is a lowest rate, as the optimum attenuation factor.

6. The noise reduction device according to claim 5, wherein said second antenna is disposed near a noise source.

7. The noise reduction device according to claim 6, further comprising:

means for regularly updating said optimum attenuation factor to a new optimum attenuation factor.

8. A noise reduction device comprising:

a first antenna which receives a wireless signal;

a second antenna for noise scanning;

means for detecting a level difference between a peak of the received signal from said first antenna and a peak of a received signal from said second antenna;

means for calculating an attenuation factor based on the detected

level difference;

means for attenuating the received signal from said second antenna at the attenuation factor calculated by said calculation means; and

means for subtracting an output signal of said attenuation means from the received signal from said first antenna, and for thereby reducing a noise of the received signal from said first antenna.

9. A noise reduction device comprising:

a first antenna which receives a wireless signal;

a second antenna for noise scanning;

a third antenna for noise transmission;

means for generating a signal having an reverse-phase to a phase of a noise signal received at said second antenna for noise scanning; and

means for transmitting the generated reverse-phase signal from said third antenna for noise transmission, thereby canceling a noise component of the received signal at said first antenna.

10. A noise reduction device comprising:

a first antenna which receives a wireless signal;

means for generating a spurious-signal;

a second antenna which transmits the spurious-signal;

a third antenna which is provided near said second antenna and which receives the spurious-signal transmitted from said second antenna;

means for detecting a level difference between the signal received at said first antenna and the signal received at said third antenna;

means for setting an optimum attenuation factor according to the detected level difference;

means for attenuating the received signal from said third antenna at the optimum attenuation factor; and

means for subtracting an output signal of said attenuation means from the received signal from said first antenna, for thereby reducing a noise of the received signal from said first antenna.

11. A noise reduction device comprising:

a first antenna which receives a wireless signal;

a second antenna for noise scanning;

means for setting an optimum attenuation factor according to a distance between said first antenna and said second antenna;

first peak detection means for detecting a peak of the received signal from said first antenna;

second peak detection means for detecting a peak of a received signal from said second antenna;

means for comparing the peak detected by said first peak detection means with the peak detected by said second peak detection means;

means for extracting a noise component from the received signal having the higher peak based on a comparison result of said comparison means;

means for attenuating the extracted noise component at the optimum attenuation factor; and

means for subtracting an output signal of said attenuation means from the received signal from said first antenna, and for thereby reducing a noise of the received signal from said first antenna.

12. The noise reduction device according to claim 11, wherein

said setting means measures an error occurrence rate of an output signal of said subtraction means while changing the attenuation factor of said attenuation means, and sets the attenuation factor, at which the measured error occurrence rate is a minimum rate, as the optimum attenuation factor.

13. The noise reduction device according to claim 11, wherein

said setting means detects a level difference between the peak of the received signal from said first antenna and the peak of the received signal from said second antenna, and calculates the optimum attenuation factor based on the detected level difference.

14. The noise reduction device according to claim 1, further comprising:

means for measuring an error occurrence rate of the received signal from said first antenna;

means for comparing the measured error occurrence rate with a preset specified value; and

means for turning on and off a power of said second antenna based on a comparison result of said comparison means.

15. The noise reduction device according to claim 2, further comprising:

means for measuring an error occurrence rate of the received signal from said first antenna;

means for comparing the measured error occurrence rate with a preset specified value; and

means for turning on and off a power of said second antenna based on a comparison result of said comparison means.

16. The noise reduction device according to claim 8, further comprising:

means for measuring an error occurrence rate of the received signal from said first antenna;

means for comparing the measured error occurrence rate with a preset specified value; and

means for turning on and off a power of said second antenna based on a comparison result of said comparison means.

17. The noise reduction device according to claim 9, further comprising:

means for measuring an error occurrence rate of the received signal from said first antenna;

means for comparing the measured error occurrence rate with a preset specified value; and

means for turning on and off a power of said second antenna based on a comparison result of said comparison means.

18. The noise reduction device according to claim 10, further comprising:

means for measuring an error occurrence rate of the received signal from said first antenna;

means for comparing the measured error occurrence rate with a preset specified value; and

means for turning on and off a power of said second antenna based on a comparison result of said comparison means.

19. The noise reduction device according to claim 11, further comprising:

means for measuring an error occurrence rate of the received signal

from said first antenna;

means for comparing the measured error occurrence rate with a preset specified value; and

means for turning on and off a power of said second antenna based on a comparison result of said comparison means.

20. A wireless LAN base station apparatus comprising the noise reduction device according to claim 1.

21. A wireless LAN base station apparatus comprising the noise reduction device according to claim 2.

22. A wireless LAN base station apparatus comprising the noise reduction device according to claim 8.

23. A wireless LAN base station apparatus comprising the noise reduction device according to claim 9.

24. A wireless LAN base station apparatus comprising the noise reduction device according to claim 10.

25. A wireless LAN base station apparatus comprising the noise reduction device according to claim 11.